

## AIR CURTAIN DESTRUCTOR RECORDKEEPING AND REPORTING

**Purpose** This Meteorology and Air Quality Group (MAQ) procedure describes the record keeping, reporting, and opacity monitoring requirements associated with the operation of air curtain destructors.

**Scope** This procedure applies to the individuals in the Meteorology and Air Quality Group assigned to observe burns, notify regulators, and track and report activities.

**In this procedure** This procedure addresses the following major topics:

Topic	See Page
General Information About This Procedure	2
Who Requires Training to This Procedure?	2
Air Curtain Destructors	4
Periodic Assessments of the Operating Parameters	7
Determining Stability Conditions	10
Annual Reports	11
Opacity Monitoring	12
Opacity Exceedance Reporting	14
Relocation Notices	16
Records Resulting from This Procedure	17

**Hazard Control Plan** The hazard evaluation associated with this work is documented in Attachment 1: Initial risk = **medium**. Residual risk = **low**. Work permits required: none. First authorization review date is one year from group leader signature below; subsequent authorizations are on file in group office.

**Signatures**  
(continued on  
next page)

Prepared by:  _____ Jackie Hurtle, MAQ	Date:  <u>7/29/02</u>
Approved by:  _____ Scott Miller, Regulatory Line Services Team Leader	Date:  <u>7/30/02</u>
Work authorized by:  _____ Jean Dewart, MAQ Acting Group Leader	Date:  <u>7/30/02</u>

09/30/02

### CONTROLLED DOCUMENT

This copy is uncontrolled if no signatures are present or if the copy number stamp is black. Users are responsible for ensuring they work to the latest approved revision.

## General information about this procedure

### Signatures, *continued*

Approved by:  Terry Morgan, QA Officer	Date:  <u>7/30/02</u>
--	-----------------------------

### Attachments

This procedure has the following attachments:

Number	Attachment Title	No. of pages
1	Hazard Control Plan	2
2	Sample of Form 801, Excess Emission Form	1
3	Sample of Daily Air Curtain Destructor Documentation Record	1

### History of revision

This table lists the revision history and effective dates of this procedure.

Revision	Date	Description Of Changes
0	2/21/02	New document.
1	8/19/02	Changes in materials to be burned and the hours of operation, and added EPCRA reporting requirements.

### Who requires training to this procedure?

The following personnel require training before implementing this procedure:

- Personnel assigned to monitor opacity, assess operations, assess operating logs, and to track, document, and report air curtain destructor activities.

### Training method

The training method for this procedure is “**self-study**” (reading) and is documented in accordance with the procedure for training (MAQ-024).

### Prerequisites

In addition to training to this procedure, the following training is also required prior to performing opacity monitoring or site inspections:

- Site-specific training for the site where burners are located (see “Safety at the burn site” on page 13)

## General information, continued

---

### Definitions specific to this procedure

Wood waste: Wood waste (40 CFR 60 Subpart CCCC) means untreated wood and untreated wood products, including tree stumps (whole or chipped), trees, tree limbs (whole or chipped), bark, sawdust, chips, scraps, slabs, millings, and shavings. Wood waste does not include:

- (1) Grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands.
- (2) Construction, renovation, or demolition wastes.
- (3) Clean lumber.

Yard waste: Yard waste (40 CFR 60 Subpart AAAA) means grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs. They come from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands. Yard waste does not include two items:

- (1) Construction, renovation, and demolition wastes that are exempt from the definition of “municipal solid waste” in this section.
  - (2) Clean wood that is exempt from the definition of “municipal solid waste” in this section.
- 

### References

The following documents are referenced in this procedure:

- MAQ-024, “Personnel Training”
- MAQ-307, “Opacity Monitoring”
- Letter ESH-17:01-298, to Mr. Carl Edlund, EPA, from Doug Stavert, June 27, 2001
- Letter ESH-17:01-410, to Mr. John Volkerding from Doug Stavert, September 4, 2001
- Letter ESH-17:01-476, to Mr. John Volkerding from Scott Miller, October 22, 2001
- Memo ESH-17:01-485, “Modification to LANL’s Open Burn Permit for the Operation of the Air Curtain Destructors,” to Steve Mee from Scott Miller, October 30, 2001
- Letter ESH-17:02-005, to Mr. Carl Edlund, EPA, and John Volkerding, NMED, January 3, 2002.
- Letter ESH-17:02-064, to John Volkerding, NMED, February 11, 2002.
- Letter to Scott Miller from John Volkerding, NMED, March 7, 2002
- Letter RRES-MAQ:02-208, to John Volkerding, NMED, June 10, 2002.
- Letter to Scott Miller from John Volkerding, NMED, June 12, 2002.

## Air curtain destructors

---

### Description

Air curtain destructors are units used by LANL to reduce the volume of wood and wood slash cut from operating areas as a result of fuel mitigation activities. In addition, they can be used to reduce the volume of yard waste such as hay remaining from flood mitigation measures.

Air curtain destruction improves combustion and reduces emissions by introducing high velocity air into a combustion environment. As the air continuously rotates in and over the environment, a “curtain” is created over the fire thus trapping smoke and particulate matter. Constant airflow into and over the combustion environment allows temperatures to remain high, resulting in relatively complete combustion of all emission products. By conducting open burning operations with the aid of air curtain destruction, LANL can avoid the generation of significant quantities of air pollutants.

LANL owns and operates three units. There are two trench burners (series T-350) and one portable surface unit (series S-127). The T series trench burner is a mobile (trailer mounted) unit which is used in combination with an earthen pit made to function as the fire box. The S-series machine is a portable system utilizing a refractory walled enclosure. The S-series is completely self-contained and does not require any set-up or tear-down.

---

### Applicable regulations

The air curtain destructors are applicable sources under the following regulations:

- 20 NMAC 2.3 – Ambient Air Quality Standards
- 20 NMAC 2.7 – Excess Emissions During Malfunction, Startup, Shutdown or Scheduled Maintenance
- 20 NMAC 2.60 – Open Burning
- 20 NMAC 2.70 – Operating Permits
- 20 NMAC 2.73 – Notice of Intent and Emissions Inventory Requirement
- 40 CFR 60 Subpart CCCC – Standards of Performance for Commercial and Industrial Solid Waste Incineration Units for Which Construction is Commenced After November 30, 1999 or for Which Modification or Reconstruction is Commenced on or After June 1, 2001 (this NSPS was adopted by NMED under 20 NMAC 2.77 – NSPS)

## Air curtain destructors, continued

---

### Compliance status

The Meteorology and Air Quality Group submitted the initial notice of intent to construct to EPA for the three air curtain destructors, as required by 40 CFR 61, Subpart CCCC. The letter (ESH-17:01-298) is dated June 27, 2001. The Meteorology and Air Quality Group reported the planned initial start-up as the week of July 9, 2001 and the fuel to be 100% wood waste.

The Meteorology and Air Quality Group obtained an Open Burn Permit for the three air curtain destructor units. The Permit was issued on June 20, 2001. It expires on December 31, 2002.

The Meteorology and Air Quality Group submitted the notice (ESH-17:01-410) of initial operation to the NMED on September 4, 2001. NMED was invited to observe one of the initial burns.

The Meteorology and Air Quality Group requested (see letter ESH-17:01-476) that the permitted hours of operation be extended so that burns could start one hour after sunrise when it has been determined that the atmospheric conditions are appropriate. NMED granted the request (letter from John Volkerding dated October 10, 2001).

The Meteorology and Air Quality Group then requested (see letter ESH-17:02-064) that the permitted hours of operation be further extended so that the air curtain destructors could operate on a continuous 24 hour basis. NMED granted the request (letter from John Volkerding dated March 7, 2002).

One year later, the Meteorology and Air Quality Group revised the fuel to include yard waste as well as wood waste. The letter (RRES-MAQ:02-208) is dated June 10, 2002. NMED granted the request (letter from John Volkerding dated June 12, 2002).

---

### General responsibility

The **Facilities and Waste Operations Division** owns the equipment, manages the contract with the operators, manages the fuel mitigation activities, and documents the operations.

The **Meteorology and Air Quality Group** provides regulatory and permitting support, certified opacity observers, periodic assessments of the operating conditions and logs, and preparation and submittal of regulatory reports. The Group also keeps the official records and is the Laboratory's point of contact with EPA and NMED.

## Air curtain destructors, continued

---

<b>Log</b>	The <b>Facilities and Waste Operations Division</b> ensures a record-keeping log is kept to document the ACD operations. A sample log developed by the Meteorology and Air Quality Group is shown in Attachment 3.
<hr/>	
<b>Performing burns</b>	The <b>Facilities and Waste Operations Division</b> ensures that the units are operated in accordance with the requirements, that the appropriate logs are generated, and that the operating logs are submitted to the Meteorology and Air Quality Group on a regular basis.

## Periodic assessments of the operating parameters

<b>Description</b>	The Meteorology and Air Quality Group will review the operating logs and the operating practices periodically to ensure compliance with the applicable air quality requirements.
<b>Requirements</b>	The air curtain destructor units have an Open Burn Permit under 20 NMAC 2.60 and are subject to NSPS requirements for commercial and industrial solid waste incineration units. All burns must be conducted in accordance with permit conditions and applicable regulations.
<b>Operating schedule</b>	<p>LANL obtained approval from NMED to operate the three air curtain destructors on a continuous 24-hour basis. The extended schedule allows the air curtain destructors to achieve and sustain conditions that support complete combustion and to minimize the smoke at the times of the day when atmospheric dispersion is not as effective. Emissions will be reduced when some of the start and end cycles of the burns are eliminated. Activities that generate the most smoke, i.e. start-up and shut-down, must be scheduled to take place during daylight hours, when the atmospheric conditions are the most conducive to dispersion.</p> <p>LANL will not exceed the operating rates documented in the Notice of Intent application dated May 7, 2001. LANL will continue to verify atmospheric conditions prior to initiating any air curtain destructors burn from one hour to three hours past sunrise. The verification of stability class of A, B, C, or D at an appropriate LANL meteorological tower will ensure that LANL minimizes emissions when air stagnation is possible.</p>

## Periodic assessments of the operating parameters, continued

---

### Operating parameters

The operating requirements include the following:

- Start up and shut down activities should be performed during the period of daylight hours only: 3 hours after sunrise -- 1 hour before sunset. However, LANL obtained approval to start the burn 1 hour after sunrise when the atmospheric conditions can be verified to meet stability classes of A, B, C, or D. **NOTE:** The start of the burn means the moment of ignition. The end of the burn means the point in time that the activities to fuel the burn cease.
- Fuel loading rates per unit must not exceed:
  - 20 tons wood waste and yard waste/hr (95 yd<sup>3</sup>/hr, or 47.5 loads/hr when a load is equal to 2 yd<sup>3</sup>) or
  - 200 tons wood waste and yard waste/day (950 yd<sup>3</sup>/day, or 475 loads/day when a load is equal to 2 yd<sup>3</sup>) or
  - 30 000 tons annually.
- Fuel is limited to untreated wood, wood slash and yard waste. The following items can be burned in the units as yard waste: grass, grass clippings, bushes, shrubs, clippings from bushes and shrubs. The following items must not be burned in the units: construction or renovation or demolition waste, or clean lumber. Natural or synthetic rubber or petroleum products must not be burned. Dirt on the fuel must be minimized. The fuel must be as dry as possible.
- Location of operation must be consistent with the information provided in the most recent relocation notice from the Meteorology and Air Quality Group to NMED with dispersion modeling data.
- Smoke must be minimized. Smoke must not be allowed to pass onto or across a public road.

Opacity standards must be met:

- Opacity limit of 10 percent.
- Opacity limit of 35 percent (during start-up period within first 30 minutes of operation).



## Periodic assessments of the operating parameters, continued

---

### Operating logs

Operating logs must be accurate, complete and up to date. Ensure the logs contain the following information (and may include additional information):

- location
- identification of the unit
- type and quantity of excelsior or other fire starter
- initials of the individual logging the operations
- date, and start and end times of the burn
- description of fuel (e.g. trees downed for fuel mitigation)
- quantity of wood, slash, and yard waste
- diesel fuel consumed by the air curtain destructor engines

---

### Determine stability conditions

When the burns start within three hours after sunrise (no burn may start before 1 hour after sunrise), the operating group must determine atmospheric conditions (the groups were informed in memo ESH-17:01-485). Ensure the stability conditions were determined (either A, B, C, or D) and that these determinations were documented.

Occasionally, the operating group may contact the Meteorology and Air Quality Group for a determination of the stability conditions. Follow the steps in the next chapter.

---

### Schedule for periodic assessments

Review the operating logs and the operating practices periodically to ensure compliance with the applicable air quality requirements.

In addition to the initial opacity test, the burns must be monitored and recorded for opacity on an annual basis (see chapter *Opacity Monitoring*). The Meteorology and Air Quality Group will perform formal opacity readings twice a year and will provide more frequent unofficial opacity readings to assist the operators in determining and establishing operating conditions that minimize the smoke.

---

### Documenting assessment results

Document the results of the periodic assessments and file the records.

## Determining stability conditions

### Determine stability conditions

When the burns start within three hours after sunrise (no burn may start before 1 hour after sunrise), the operating group must determine atmospheric conditions (the groups were informed in memo ESH-17:01-485). Under normal situations, the group responsible for the burn makes this determination. If necessary (e.g., computer network connections not available), the group may contact the Meteorology and Air Quality Group for this information.

### Steps to determine stability

To determine stability conditions, perform the following steps:

Step	Action						
1	On the morning of the scheduled burn, log onto the LANL Weather Machine at address <a href="http://weather.lanl.gov">http://weather.lanl.gov</a> .						
2	Under "Current and Recent Conditions around Los Alamos," select "Detailed Tabular Summary, Short Form."						
3	Find the "PG Stability category EPA based on Sigma Phi" at the meteorology tower nearest to the burn site.  <table><tr><td><b>If the stability is...</b></td><td><b>Then...</b></td></tr><tr><td>A, B, C, or D</td><td>It is OK to burn.</td></tr><tr><td>E or F</td><td>Do not perform the burn.</td></tr></table>	<b>If the stability is...</b>	<b>Then...</b>	A, B, C, or D	It is OK to burn.	E or F	Do not perform the burn.
<b>If the stability is...</b>	<b>Then...</b>						
A, B, C, or D	It is OK to burn.						
E or F	Do not perform the burn.						
4	If OK to burn according to the above step, print out the short form and either keep a copy for the records and/or send it to the requesting operating group.						

## Annual reports

<b>Description</b>	<p>The Meteorology and Air Quality Group submits annual air emissions inventories under 20 NMAC 2.73. The actual estimated emissions from the operation of the air curtain destructors will be included in the annual report. Emissions from the combustion of wood and yard wastes and the operation of the air curtain destructor diesel engines will be included.</p> <p>The Meteorology and Air Quality Group submits annual Form R reports for chemicals that the Laboratory uses, manufactures, or produces above specified threshold quantities. The Form R report includes information on all environmental releases of the chemical (air, water, waste). The air curtain destructors may result in environmental releases of EPCRA reportable chemicals such as lead and polycyclic aromatic compounds (PACs). Emissions from the combustion of wood and yard wastes as well as estimates of reportable chemicals in the ash will be included in the Form R reporting evaluation.</p>
<b>Applicable requirements</b>	<p>LANL is subject to the annual emissions inventory requirement under 20 NMAC 2.73. Sources exceeding actual emissions of 10 tons/year must be reported to NMED with estimates of actual emissions. Emissions will be estimated from the operation of the diesel engine and the combustion of wood.</p> <p>LANL is subject to the EPCRA 313 annual reporting requirements under Executive Order (EO) 13148. The EO requires all federal facilities to comply with the provisions of EPCRA.</p>
<b>Schedules</b>	<p>The annual emissions inventory is due by April 1 unless NMED requests it by an earlier date. The EPCRA Form R reports are due to EPA and NMED by July 1 of every year.</p>
<b>Preparing the reports</b>	<p>The <b>Meteorology and Air Quality Group</b> compiles information from the operating logs, estimates emissions, drafts the annual emissions inventory report, obtains peer review, obtains and resolves comments, and finalizes and submits the report to NMED.</p> <p>The <b>Meteorology and Air Quality Group</b> compiles information from the operating log and waste disposal records, estimates releases of reportable chemicals, drafts the EPCRA 313 report, obtains peer review, obtains and resolves comments, and finalizes and submits the EPCRA Form R to NMED and EPA.</p>

## Opacity monitoring

---

<b>Description</b>	Opacity is the degree to which air pollutants reduce the transmission of light and obscures the view of a background object.
--------------------	--

---

<b>Opacity requirements</b>	Applicable opacity limits (NSPS) include:
-----------------------------	---

- 35% opacity limit (6-minute) average during the startup period that is within the first 30 minutes; otherwise,
- 10% opacity limit (6-minute) average.

These opacity limits are applicable within 60 days of reaching the charge rate but no later than 180 days after the initial start-up. The opacity limits are not applicable during malfunctions. Malfunctions must not exceed 3 hours. Certified opacity observers (from RRES-MAQ or another organization) must follow EPA Method 9 (which requires a series of three 6-minute averages) and must complete the Visible Emission Observation Form (attachment to MAQ-307, "Opacity Monitoring").

The initial opacity test must be performed within 60 days after achieving the maximum burn rate, but not later than 180 days after initial startup of each unit. Thereafter, the opacity test must be performed annually. The opacity tests must be performed under representative performance of the units. Operations during periods of startup, shutdown, and malfunction will not constitute representative conditions for the purpose of opacity testing.

## Opacity monitoring, continued

---

### Schedule for opacity monitoring

After the initial opacity test, opacity must be measured and reported annually. A Meteorology and Air Quality Group **opacity observer** will perform formal opacity readings twice a year and will provide more frequent unofficial opacity readings to assist the operators in determining and establishing operating conditions that minimize the smoke.

The following dates are significant:

<u>Unit</u>	<u>Date of start up</u>
T-1 (Rosie)	Sept. 26, 2001
T-2 (Delilah)	Oct. 11, 2001
S-1 (Xena)	Oct. 29, 2001

The initial opacity tests were conducted on December 11 and 12, 2001. Results of these tests were sent to NMED and EPA on January 3, 2002 (letter ESH-17:02-005).

---

### Record-keeping requirement

The Meteorology and Air Quality Group will maintain the initial and annual opacity test results for a period of 5 years.

---

### Opacity reporting schedule

The Meteorology and Air Quality Group submitted the results of the initial opacity test to EPA and NMED within 60 days following the initial test. The Meteorology and Air Quality Group will submit the results of the annual test within 12 months following the previous report.

---

### Safety at the burn site

When visiting the site of the ACDs, follow all site-specific requirements.

These may include:

- Safety shoes
- Hearing protection
- Hard hat
- Safety glasses
- Remain outside roped-off areas
- Follow directions of site safety personnel

## Opacity exceedance reporting

---

### Description

LANL must report excess emissions to NMED in accordance with 20 NMAC 2.7 - Excess Emissions During Malfunction, Startup, Shutdown or Scheduled Maintenance. The reporting requirement includes both verbal and written notifications.

20 NMAC 2.7 Section 111 Frequent Startups/shutdowns allow facilities which start up or shut down frequently as part of their routine operations an exemption from the notification of Section 110 of this Part as they relate to routine startup or shutdown. However, these facilities must take maximum effort to reduce excess emissions during such startup or shutdown. These facilities must also submit a written report to NMED which addresses each of the criteria within Section 109. The facilities must also include the operating schedule and expected frequency of operation of the facility in the startup or shutdown mode.

The Meteorology and Air Quality Group requested this exemption with the Notice of Intent applications that were submitted to NMED on May 7, 2001.

---

### If excess emissions occur

If there is an opacity exceedance, the Meteorology and Air Quality Group **opacity observer:**

- Contacts Facilities and Waste Operations Division (or their onsite representative) immediately to initiate corrections in the operating parameters.
- Documents the opacity results.
- Remains on site for the duration of the exceedance (until the operating conditions are corrected) or until the burn is completed.
- Attempts to collect the information that is needed for the excess emissions report (see below).
- Notifies the Meteorology and Air Quality Group Leader, the Regulatory Line Services Leader, and the appropriate project leaders.

The Meteorology and Air Quality Group prepares a report with the content specified in the block "Excess emissions report content" on the next page, obtains peer review, resolves comments, and finalizes and submits the reports to NMED.

---

### Correcting the excess emissions

The **Facilities and Waste Operations Division** ensures the operating conditions are corrected and must not allow a malfunction to generate excess emissions for more than 3 hours.

## Opacity exceedance reporting, continued

<b>Initiate excess emissions report</b>	The Meteorology and Air Quality Group <b>Regulatory Line Services Leader</b> or the <b>appropriate project leader</b> initiates the excess opacity reporting process.
<b>Excess emissions report schedule</b>	The <b>Meteorology and Air Quality Group</b> will provide verbal notification to NMED as soon as possible, but no later than 24 hours after the start of the next regular business day. The Meteorology and Air Quality Group will provide written notification to NMED within 10 business days of the start of the excess emissions (opacity).
<b>Excess emissions report content</b>	<p>The <b>Meteorology and Air Quality Group</b> will send notification to NMED that will include the following:</p> <ul style="list-style-type: none"><li>• Name of the firm (“LANL”) experiencing the excess emissions</li><li>• Name and title of the person reporting</li><li>• Location of the facility at which the exceedance occurred</li><li>• Identification of the equipment involved</li><li>• Time period that the facility was experiencing excess emissions</li><li>• Identification of the air contaminant or contaminants and an estimate of the magnitude of excess emissions</li><li>• Cause and nature of the malfunction condition or why excess emissions occurred or are occurring</li><li>• Efforts taken to minimize emissions and efforts to repair or otherwise bring the facility into compliance with the applicable emission limits</li></ul> <p>The written notification to NMED should also include the appropriate state reporting form. A sample form, Form 801, is included in Attachment 2. This form can be found online at <a href="http://www.nmenv.state.nm.us/aqb/app_form.html">http://www.nmenv.state.nm.us/aqb/app_form.html</a>.</p>

## Relocation notices

<b>Applicable requirements</b>	The air curtain destructor units are portable. LANL's open burn permit requires that NMED be notified with proposed burn locations and dispersion modeling. NMED also requested notification of burns prior to ignition.
<b>Requirements with interpretation</b>	The <b>Meteorology and Air Quality Group</b> will compile and submit the relocation notice with dispersion modeling. The notification should be prepared with a tentative schedule for operation at the proposed location. The Meteorology and Air Quality Group intends to meet the requirement for notification "for any burn prior to ignition" with this schedule information. If general scheduling information is not available for inclusion with the notification or if the intent is not met, accommodations for additional notification must be made by the Air Quality Group.
<b>Notification of relocation</b>	<b>Facilities and Waste Operations Division</b> should notify the Meteorology and Air Quality Group a minimum of 10 days before the proposed relocation, including a description of the new locations and identification of the unit/units to be relocated. The notification should include a map to clarify the position.
<b>Evaluation of new location</b>	The <b>Meteorology and Air Quality Group</b> performs the dispersion modeling, drafts the relocation notice, evaluates compliance with the ambient air quality standards, obtains peer review, obtains and resolves comments, and finalizes and submits the notification to NMED.



## Records resulting from this procedure

---

### Records

The following records generated as a result of this procedure are to be submitted as records to the records coordinator:

- Operating logs (Attachment 3 or equivalent)
  - Annual emissions inventory
  - Completed Visible Emission Observation Forms (form from MAQ-307), when performed
  - Excess emissions reports (Attachment 2), if needed
  - Relocation notices with dispersion modeling
  - Documentation of atmospheric conditions (for burns starting earlier than 3 hours before sunrise)
  - Correspondence with NMED and/or EPA
  - Documentation of periodic assessments by the Meteorology and Air Quality Group
- 

### Records series content

The following records, with those listed above, comprise the complete records series for the air curtain destructor:

- Open Burn Permit
- Open Burn Permit application
- Notice of Intent application
- Notice of Intent to Construct to EPA
- Notice of Start-up to NMED



## HAZARD CONTROL PLAN

1. The work to be performed is described in this procedure.

### **“Air Curtain Destructor Recordkeeping And Reporting”**

2. Describe potential hazards associated with the work (use continuation page if needed).

The Meteorology and Air Quality Group personnel will travel to sites with air curtain destructors in operation to observe the work and make opacity measurements.

The various facilities within the Laboratory can contain unique hazards not readily identifiable except by the controlling entities of that facility.

Sun exposure: The ultraviolet radiation levels are greater at high elevation, easily causing sunburn.

Tripping: various obstructions and uneven surfaces may exist in many places.

Falls: the burning takes place in a pit (9' x 9' x 35').

Proximity to fire: heat, burning embers, blowing ashes are hazards.

Heavy equipment moving: grappler for adding wood, others possible.

High noise levels: diesel engine running the fan in the destructor, heavy equipment engines.

3. For each hazard, list the likelihood and severity, and the resulting initial risk level (before any work controls are applied, as determined according to LIR300-00-01.0, section 7.2)

Unique facility hazards: improbable/ critical = low

Sun exposure: frequent / negligible = low

Tripping: occasional / moderate = low

Falls: occasional / moderate = low

Proximity to fire: probable / moderate = medium

Heavy equipment moving: probable / moderate = medium

High noise levels: probable / moderate = medium

Overall *initial* risk: ☐ Minimal ☐ Low ☒ Medium ☐ High

4. Applicable Laboratory, facility, or activity operational requirements directly related to the work:

☐ None

☒ List:

Work Permits required? ☒ No ☐ List:

### HAZARD CONTROL PLAN, continued

5. Describe how the hazards listed above will be mitigated (e.g., safety equipment, administrative controls, etc.):

Unique facility hazards: The Meteorology and Air Quality Group personnel will comply with access control and work requirements of all the Laboratory's facilities. The site personnel will monitor and escort all visitors at all times.

Sun exposure: this is covered in RRES-MAQ "Safety and Security Information for All Employees."

Tripping: this is covered in RRES-MAQ "Safety and Security Information for All Employees."

Falls: Do not approach within 6 feet of edges with greater than 6 foot drop. Site personnel have roped off areas, supervise all visitors, and do not allow extended stays near the pit.

Proximity to fire: do not approach the edge of the pit. Be aware of wind direction and try to stay upwind of the burn. Site personnel have roped off areas, supervise all visitors, and do not allow extended stays near the pit.

Heavy equipment moving: be aware of the movement of equipment, remain alert to your surroundings. Site personnel have roped off areas and supervise all visitors.

High noise levels: wear hearing protection. Site personnel require hearing protection to be worn by everyone at location. (Ear muff style is recommended for best protection.)

PPE requirements: hearing protection, safety glasses, hard hat, safety shoes. These requirements are enforced by the site personnel.

6. Knowledge, skills, abilities, and training necessary to safely perform this work (check one or both):



Group-level orientation (per MAQ-032) and training to this procedure.



Other → See training prerequisites on procedure page 3. Any additional describe here:

7. Any wastes and/or residual materials? (check one) ☒ None ☐ List:

8. Considering the administrative and engineering controls to be used, the *residual* risk level (as determined according to LIR300-00-01.0, section 7.3.3) is (check one):



Minimal



Low



Medium (requires approval by Division Director)

9. Emergency actions to take in event of control failures or abnormal operation (check one):



None



List:

For all trips, falls, burns, or cuts, provide first aid and see that injured person is taken to ESH-2 or the hospital. Follow all site-specific emergency plans for any radiation or explosives emergencies.

Signature of preparer of this HCP: This HCP was prepared by a knowledgeable individual and reviewed in accordance with requirements in LIR 300-00-01 and LIR 300-00-02.

Preparer(s) signature(s)

Name(s) (print)

/Position

Date

Signature by group leader on procedure title page signifies authorization to perform work for personnel properly trained to this procedure. This authorization will be renewed annually and documented in RRES-MAQ records. Controlled copies are considered authorized. Work will be performed to controlled copies only. This plan and procedure will be revised according to MAQ-022 and distributed according to MAQ-030.

**AIR QUALITY BUREAU**

**ENFORCEMENT SECTION**  
**2048 GALISTEO STREET**  
**SANTA FE, NM 87505**

20NMAC2.7

**EXCESS**  
**EMISSION FORM**  
TO BE USED FOR EMERGENCIES, FAILURES,  
DEVIATIONS AND MALFUNCTIONS

Note: This form with original signature must be submitted to the address above within 10 days of the 1<sup>st</sup> business day following the start of the deviation / emergency.

**TRACKING NUMBER:** \_\_\_\_\_

DATE OF SUBMISSION:	TIME OF SUBMISSION:	COMPANY NAME:
NAME OF INDIVIDUAL REPORTING	TITLE:	PHONE:
FACILITY:	COUNTY:	PERMIT NUMBER(S):
FAILURE DATE:	CORRECTED DATE:	CORRECTED TIME:
DESCRIPTION OF EQUIPMENT:		
NATURE AND CAUSE:		
CORRECTIVE MEASURES:		
DURATION OF EXCESS EMISSIONS (HOURS)	NOx:	SO2: PM: SULFUR: OTHER:
ESTIMATED EMISSIONS (LBS)	NOx:	SO2: PM: SULFUR: OTHER:
After reasonable inquiry, I certify this report as true, accurate and complete. <b>SIGNATURE OF PERSON RESPONSIBLE FOR TITLE V:</b>	<b>TITLE:</b>	<b>BASIS OF ESTIMATE</b> ___ COMPLIANCE TESTING ___ CONTINUOUS EMISSION MONITOR ___ CALCULATION ___ OPERATING LOGS
<b>SIGNATURE OF REPORTING PERSON:</b>	<b>TITLE:</b>	



RRES-MAQ, Air Quality

# Daily Air Curtain Destructor Documentation Record

This form is from MAQ-328

Air Curtain Destructor ID: _____		Air Curtain Destructor Location _____				Date of notification to MAQ regarding relocation <sup>1</sup> : _____			
Date	Initials	Description of fuel <sup>2</sup>	Time of ignition	Time of burn end	Max fuel loading rate, tons/hr (must be ≤ 20 t/hr)	Total fuel (must be ≤ 200 tons/day)	Diesel fuel added to engine	Excess smoke encountered? <sup>3</sup> If yes, note date and time MAQ was contacted	Comments
								Y / N MAQ notified: Date: _____ Time: _____	
								Y / N RRES-MAQ notified: Date: _____ Time: _____	
								Y / N RRES-MAQ notified: Date: _____ Time: _____	
								Y / N RRES-MAQ notified: Date: _____ Time: _____	
								Y / N RRES-MAQ notified: Date: _____ Time: _____	
								Y / N RRES-MAQ notified: Date: _____ Time: _____	
								Y / N RRES-MAQ notified: Date: _____ Time: _____	
								Y / N RRES-MAQ notified: Date: _____ Time: _____	
								Y / N RRES-MAQ notified: Date: _____ Time: _____	
								Y / N RRES-MAQ notified: Date: _____ Time: _____	
								Y / N RRES-MAQ notified: Date: _____ Time: _____	
								Y / N RRES-MAQ notified: Date: _____ Time: _____	

Fax to RRES-MAQ at 665-8858 at end of last burn each week.

<sup>1</sup>To meet NMED permit requirements, notify RRES-MAQ at least 10 working days prior to moving the ACD.

<sup>2</sup> Burn only trees downed during fire mitigation activities. Grass, grass clippings, bushes, shrubs can be burned as yard waste. DO NOT burn construction, renovation or demolition waste, or lumber. DO NOT burn natural or synthetic rubber or petroleum products. Minimize the amount of dirt on the material being burned.

<sup>3</sup> Opacity readings must be less than 35% during startup and must be less than 10% during operation, and smoke must not be allowed to pass onto or across a public road. RRES-MAQ will conduct periodic inspections to ensure that operations meet these criteria; however, if excess smoke is encountered, please contact RRES-MAQ at 665-8855 so that they can make necessary notifications.